

ABSTRACT OF THE DISCLOSURE

A polarizing illumination optical system includes a light source with a parabolic reflector with a light emitter at its focal point so that the light source emits substantially collimated light toward a polarization conversion optical system that separates the light into two polarizations, converts the light to a single polarization, and projects the light through an optical integrator that includes two integrating plates so as to provide a more uniform intensity light beam. The polarization conversion optical system satisfies the following condition: $4f < D < 7f$, where f is the focal length of the parabolic reflector, and D is the minimum width of the optical incidence aperture of the polarization conversion optical system. A projection display device uses the polarizing illumination optical system to illuminate modulators, such as LCDs, that provide different color image components that a projection lens projects on a screen to provide a full color image.